



# SWR

New FTX-1 Now Available

**SWR** Introduction

**Technical Section**

Demystifying ALC and the Processor

**DIY**

Slim Jim: Vertical Power Within Your Reach

**Hamvention 2025**

Gear, Gatherings, and Unlimited Excitement



(Issue No. 2 – June 2025)



# On the cover

Intellectual Property of Caribbean  
Amateur Radio Group  
Hatillo, Puerto Rico



## On the Cover

The image on this edition of SWR captures the vibrant spirit of community that defines the most anticipated event for amateur radio enthusiasts: Dayton Hamvention 2025. Taken from the official W8DYY site, this panoramic shot showcases a diverse crowd of on-air enthusiasts gathered in Xenia, Ohio, sharing knowledge, equipment, and a deep passion for ham radio. More than just a fair, Hamvention is a meeting point that celebrates technology, camaraderie, and the global commitment to communication. This image is a visual tribute to all those who make the airwaves a borderless gathering place.

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A practical glossary-style guide

**Subscribe completely free at:** <https://forms.gle/TtB7GrUd2eQn2pqP9>



"Ham radio not only connects us with the world, but also with the best in ourselves: curiosity, collaboration, and a constant desire to learn."





# Editorial – SWR

## **Thank you for being part of this great dream!**

With boundless enthusiasm and gratitude, we welcome you to the second edition of SWR, a publication that began as a dream of the Caribbean Amateur Radio Group and that—thanks to you—is already becoming a reference point within the fascinating world of amateur radio.

Our first issue exceeded every expectation, receiving a warm reception both in Puerto Rico and around the globe. That fills us with pride but also with responsibility. It motivates us to keep creating relevant, educational, and entertaining content for the great family of radio amateurs who share our passion for the airwaves, antennas, experimentation, and community service.

Hams were already communicating over the airwaves in the early 20th century—long before the broadcast stations we know today!

From its inception, SWR has had a clear vision: not just to be a local magazine, but an open window to the world—a platform where we can share knowledge, experiences, stories, and technical news, no matter the borders.

That's why, in this new edition, we renew our invitation to all fellow hams who wish to collaborate with articles, projects, essays, or simply share their experiences in the hobby. This space is yours, too! We would love to feature your contributions in upcoming issues.

The magazine will be published every two months, and each edition will bring fresh surprises that we hope will continue to inspire and connect you.

Thank you for being here. Thank you for reading. And thank you for keeping amateur radio a vibrant, lively, and supportive experience.

See you on the next frequency!

73 from the SWR editorial team

♦ Did you know that amateur radio was born before commercial radio? Hams were already communicating over the airwaves in the early 20th century—long before the broadcast stations we know today!

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# WORLD NEWS

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May–June, 2025

● [caribbean.crg@gmail.com](mailto:caribbean.crg@gmail.com) ●

News-News-News

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## Record Participation in Amateur Radio Exam in Bangladesh

### *Over 900 Participants*

**BANGLADESH** – The amateur radio community in Bangladesh has achieved a milestone in 2025, recording a historic level of participation in the amateur radio licensing exams. According to recent reports, the number of candidates far exceeded that of

previous years, reflecting a growing interest in amateur radio—especially among young people. This remarkable increase highlights the importance of the educational and promotional efforts carried out by the local community to encourage this technical and social hobby. Congratulations to our Bangladeshi colleagues on this achievement!



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## Amateur Radio Operators Kept Communications Alive During Blackout

**SPAIN** – A group of twelve amateur radio operators from Ourense, members of the Emergency Radio Network (Red de Radio de Emergencias, REMER), activated their equipment and offered their support to the Provincial Operational Coordination Center (CECOP) to help maintain communication between various emergency response services during the long hours of the blackout. Their support is always welcome in situations like this, as they are able to establish communications without the need for an

electrical grid. After receiving REMER's activation message at 1:00 p.m., the volunteers joined the emergency operation. Four of them, including two coordinators, set up a station at the Government Subdelegation, while eight others were deployed across different parts of the province, keeping communications open until 3:00 a.m. "We focused on receiving information and transmitting instructions to the most affected areas," explained José Ángel Casanova, the provincial coordinator. At the request of CECOPI, they checked whether any health centers required power generators and remained alert to other potential needs. "We quickly realized this was a major blackout," he added.

Source: [noticiasdelradioaficionado.com](http://noticiasdelradioaficionado.com)



# Hawaii Declares June as Amateur Radio Month



## Proclamation

**WHEREAS**, the celebration of Amateur Radio Month is to recognize the impact of radio transmissions over the centuries and the interrelationships of amateur radio operators worldwide; and

**WHEREAS**, amateur radio operators have provided countless hours of necessary service throughout the past 100

**WHEREAS**, they have also provided a bridge between individuals, societies, and countries by creating knowledge and sharing ideas; and

**WHEREAS**, Amateur Radio Month is needed by more than 750,000 amateur radio operators in the United States and 1,000 in the Pacific region; and

**WHEREAS**, in 1914, the Hawaii Wireless Telegraphy Station located on Oahu's North Shore opened, and in 1916, messages were transmitted 4,200 miles from Hawaii to Japan; and

**WHEREAS**, Hawaii's Amateur Radio Club celebrated on the weekend of June 18 and 19, 2025 with the "Hawaii Day" operating event that stimulates setting up a station "in the field" and operating 14 hours to help the United States and Canada to receive communications with the state's radio emergency operators.

**NOW, THEREFORE**, I, Josh Green, M.B., Governor of the State of Hawaii, do hereby proclaim June 1, 2025, as

### "AMATEUR RADIO MONTH"

to honor and ask the people of the State to join in recognizing and honoring a warm tradition of all amateur radio operators for their dedication and volunteering commitment to public service and emergency response, observed on the dates of June 18 and 19, 2025.

*Josh Green, M.B.*  
Governor of Hawaii

**HAWAII** – Hawaii Governor Josh Green, M.D., has officially proclaimed June 2025 as “Amateur Radio Month” in the state. This proclamation recognizes the valuable contributions of amateur radio operators in providing emergency communication services and strengthening community disaster preparedness. The announcement was recently shared by the local amateur radio community on their Instagram account.

This initiative aligns with similar efforts in other states, such as New Hampshire, where proclamations have been issued to highlight the essential role of amateur radio in emergency situations and in promoting public safety.

In Hawaii, the amateur radio community remains active and engaged. For example, the Maui Amateur Radio Club, established in 1936, is the oldest amateur radio club in the state and meets monthly to encourage participation and ongoing learning in amateur radio.

For more details about the proclamation and related events, you can visit the Ham Radio Hawaii website: <https://www.hamradiohawaii.com/>

# All Asian DX Contest 2025

**JAPAN** – The Japan Amateur Radio League (JARL) has announced the 66th edition of the All Asian DX Contest, one of the most prominent events on the international amateur radio contest calendar. This contest, which promotes communication between Asian stations and the rest of the world, will be held in two modes: CW (Morse code) on June 21 and 22, and Phone (voice) on September 6 and 7, 2025.

The contest covers the 160, 80, 40, 20, 15, and 10 meter bands and offers various categories for single operators and multi-operator stations, both in high and low power. Additionally, there are special categories for young operators (under 19 years old) and veterans (over 70 years old), encouraging intergenerational participation.

A distinctive feature of this contest is the exchange of information during contacts: participants are asked to send the RS(T) report along with the operator's age or the average age in the case of multi-operator stations. This unique element adds a more personal connection between participants. Logs must be submitted electronically (in Cabrillo or JARL format) within 10 days after each contest mode. Participants can opt for electronic certificates, and winners in each category will receive commemorative plaques. For more details and to review the complete rules, visit the official JARL website: <https://www.jarl.org>

**All Asian DX**  
**CONTEST**  
Phone

**All Asian DX**  
**CONTEST**  
Phone



# Building a Slim Jim Antenna

By: José M. Candelaria NP4ET

## AN EFFICIENT SOLUTION FOR AMATEUR RADIO OPERATORS

*If you are an amateur radio operator looking for an affordable, efficient, and easy-to-build antenna, the Slim Jim antenna might be the perfect solution. Originally designed for the 2-meter band, this vertical antenna has gained popularity due to its low cost, simple construction, and remarkable performance. In this article, we guide you step-by-step through its fabrication.*



Dimensions (for 2 meters, 146 MHz)

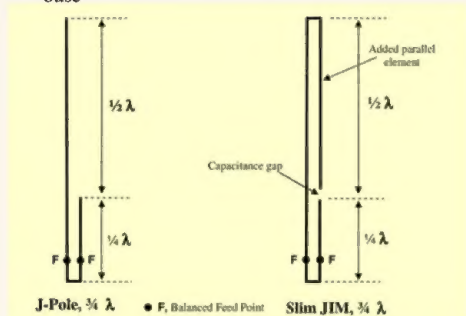
### What is a Slim Jim Antenna?

The Slim Jim is an improved version of the J-pole antenna, known for its high gain and flatter radiation pattern, which favors horizon-level communications (ideal for VHF). Its name comes from the words "Slim" (thin) and "J Integrated Matching." It uses a folded transmission line design that acts as an impedance transformer.

### Materials Needed:

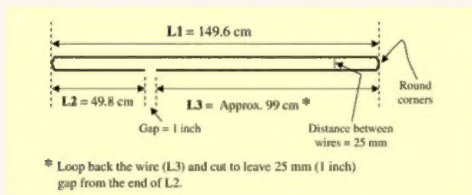
- 1/2 inch copper tubing (approximately 1.5 cm)
- SO-239 connector or similar
- RG-58 or RG-213 coaxial cable
- Solder and flux for copper
- Clamps or plastic zip ties
- Ruler and permanent marker
- Metal saw or tubing cutter

- Total antenna length: 1.5 meters
- Separation between vertical tubes: approximately 2.5 cm
- Gap between the tubes at the bottom (slot): approximately 2.5 cm
- Height of the feed point (tap): 50 mm from the base

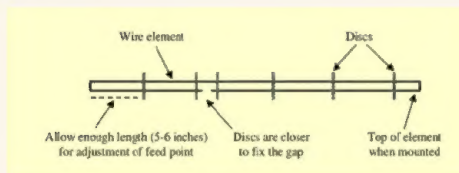


## tep-by-Step Construction

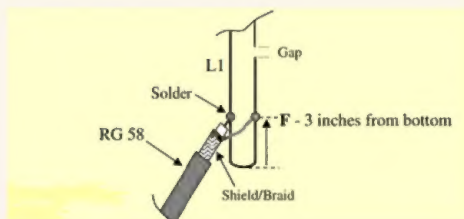
**Cutting and Preparing the Tubing:** Cut the copper tubing into two main sections: one 1.5 meters long (long element) and another approximately 1.35 meters (short element), leaving the bottom gap of 2.5 cm.



**Shaping the Antenna:** Position both sections in parallel, evenly spaced using plastic clamps or zip ties. Make sure to leave the bottom slot open (not connected).

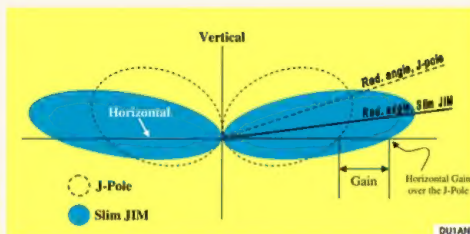


**Installing the Coaxial Connector:** Solder the coaxial center conductor to the point located 50 mm from the base of the longer tube, and solder the shield (ground) to the shorter tube at the same height.



**Testing and Adjustments:** Use an SWR meter to adjust the feed point height to minimize losses. The ideal point is usually between 40 and 60 mm from the bottom end.

Images: DU1ANV



The Slim Jim antenna is an improved variant of the J-Pole antenna, and although both share a similar design and are commonly used in the VHF/UHF bands, the Slim Jim offers several notable advantages over the J-Pole:

✈ Advantages of the Slim Jim over the J-Pole 📶

**Higher Effective Gain** The Slim Jim has a gain of about 6 dBi, higher than the typical 3–4 dBi gain of the J-Pole. This is due to its flatter and more efficient radiation pattern, which concentrates more energy at the horizon—ideal for terrestrial communications.

📶 **Better Radiation Pattern** Unlike the J-Pole, the Slim Jim minimizes radiation upwards and downwards, reducing unwanted interference and maximizing horizontal range.

🔊 **Lower Noise and Better Reception** Its design allows for reduced pickup of environmental noise, especially in urban areas or places with high QRM (electromagnetic interference).

🔧 **Ease of Adjusting SWR** It is easier to adjust the feed point (tap) on the Slim Jim to achieve good impedance matching. This results in lower SWR and better transmission efficiency.

💰 **Economical Construction** Although both antennas are affordable, the Slim Jim can be built using copper tubing or metal tape measure, both readily available materials. It does not require a balun, which simplifies the design even further.

🎯 **Wider Bandwidth** The Slim Jim offers a broader bandwidth, meaning you can operate over a wider range of frequencies without needing to retune the antenna.

⚡ **Better Impedance Matching** Thanks to its integrated transmission line, the Slim Jim provides smoother 50-ohm matching without external transformers.



# ARRL FIELD DAY 2025

## "RADIO CONNECTS"

JUNE  
28-29



By: SWR Editorial Team

Save the date! This year, ARRL Field Day 2025 will be held on June 28 and 29, coinciding, as always, with the fourth full weekend of June. This iconic event, organized by the ARRL (American Radio Relay League), is much more than a technical exercise: it is a community experience, educational, and an open window into the fascinating world of amateur radio.

### What is Field Day?

Field Day is amateur radio's open house. Every year, over 31,000 amateur radio operators across North America set up temporary transmitting stations in parks, plazas, schools, and other public spaces to demonstrate the capabilities of amateur radio in emergency situations, promote camaraderie, share technical knowledge, and introduce the public to the world of radio waves.

Since its inception in 1933, Field Day has become the most popular event in the amateur radio community, combining elements of a picnic, camping, friendly contest, and emergency drill—all in a single weekend.

### 2025 Theme: Radio Connects

This year, the event's motto is "Radio Connects," highlighting the power of wireless technology to bring people together across great distances, even when traditional communication systems fail. Field Day 2025 celebrates how amateur radio continues to be a vital resource, an educational tool, and a bridge between generations and communities.

### Why Participate?

- **Public Service and Emergency Preparedness:** Field Day demonstrates how amateur radio operators can provide support during disasters and community events when other systems fail.
- **STEM Education:** The event encourages children and young people to explore science, technology, engineering, and mathematics through hands-on experimentation.
- **Technical Skill Development:** Participants operate under challenging conditions, improving their ability to communicate effectively in real-world situations.
- **Fun and Camaraderie:** It's a great opportunity to share, learn, and build connections with like-minded people, both locally and beyond.





## How do you participate?

The main objective is to make as many contacts as possible on HF bands (160 to 10 meters) and frequencies of 50 MHz and above, using voice, data, and digital modes. The activity is open to all amateur radio operators in areas covered by ARRL/RAC and countries in IARU Region 2.

All contacts must be made with direct operator involvement, either locally or via remote control. Additional points are awarded for public outreach activities, such as inviting media, setting up stations accessible to the public, and sharing the experience on social media using the official hashtag.

## We look forward to seeing you at ARRL Field Day 2025!

- ◆ When: June 28–29, 2025
- ◆ Where: Across North America. Use the locator on the official site to find a station near you.
- ◆ Official website: [www.arrl.org/field-day](http://www.arrl.org/field-day)

Because when all else fails... amateur radio works!



## Available Resources

ARRL offers numerous resources for participants on its website, including:

- Official rules and entry forms
- Locator for nearby Field Day sites
- Promotional materials and posters
- Contact logging software

## An Open Invitation

The ARRL Field Day is not just for amateur radio operators—it's for the entire community! If you're interested in learning about communications, electronics, emergency services, or simply want to meet passionate people who love technology, this is your moment. Many operators began their journey in amateur radio by attending a Field Day. This might be your year to join in.

## ¿Who is the ARRL? The ARRL

(American Radio Relay League) is the national association for amateur radio in the United States, with over 137,000 members. It works to promote, protect, and advance the art and science of amateur radio. The ARRL provides educational resources, regulatory advocacy, and support for clubs and individual operators—both in the U.S. and throughout IARU Region 2.





# REMOTE RADIO ADVENTURES:

CHASING DX AND MASTERING CONTESTS FROM ANYWHERE

By: Juan Montijo WP4OV



## WELCOME TO THE GOLDEN AGE OF REMOTE RADIO.

**"Remote radio operation not only breaks geographic barriers, it also unites hearts through the air. Every connection is an invisible bridge that reminds us that, no matter the distance, the waves keep us connected as one big family of amateur radio operators."**



There is a silent thrill in turning the dial and tuning into a weak station from the other side of the world. But imagine doing it from a high-power station on a coastal cliff in Maine or atop a mountain in California—all without leaving your home. Thanks to the growing availability of remote rental amateur radio stations, that dream is now a reality for both DXers and contesters alike.

**The Rise of Remote Operation**  
In the past, serious DXing or contesting required an equally serious station: tall towers, stacked beams, legal-limit amplifiers, and acres of land. Today, platforms like Remote Ham Radio (RHR) and RemoteHams.com allow licensed operators to rent time on world-class stations using nothing more than a laptop or tablet.

This evolution has changed the game—not only for hams living in neighborhoods with homeowners association restrictions, but also for travelers, apartment dwellers, and even those simply looking to try something new.



The Supercharged DX Experience  
Tuning into the Pacific or chasing a rare 6-meter activation? Remote stations often feature antennas and locations designed for optimal performance. Imagine the advantage of transmitting to Europe from a station in the U.S. Northeast with a full-size Yagi antenna on a 30-meter tower—and without any urban background noise.

#### From the comfort of your home, you can:

- Instantly switch bands and beam directions
- Enjoy world-class receive performance
- Log your contacts in your favorite software
- Upload QSLs directly to LOTW or Club Log

Many users report that their DXCC and WAS totals began to increase faster than ever once they started using remote stations.



#### Cloud Contesting

If you've ever wished to compete in major contests from a "superstation," remote rentals offer you that opportunity. Some platforms, like RHR, provide dedicated contest stations with optimized antennas, fast internet, and minimal downtime.

#### Remote contesting means:

- Flexibility to operate from anywhere with internet
- The ability to team up with others for multi-operator efforts
- Consistently high performance regardless of your local QTH

And for those who can't dedicate a full 48 hours to an event, remote rentals let you join and leave contests on your own schedule while staying competitive.

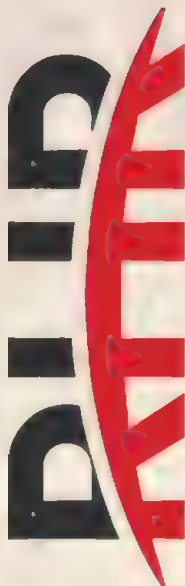
#### Try Before You Buy — Or Don't Buy at All

Remote operation isn't just about convenience; it can also be a smart investment. Before spending thousands on gear, you can test different platforms, antennas, and operating styles. Or you might find that paying by the minute or month for a high-end station is more cost-effective than building your own.

#### Services like:

- Remote Ham Radio: high-end stations with pay-per-minute access
- RemoteHams.com: community-managed stations, often free to use
- RemoteTx: turns your own equipment into a remotely operated station

Each offers different pricing models and equipment, so there's something for every budget.

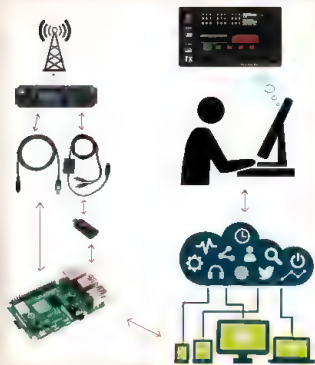


# REMOTE HAM RADIO



## The Future Is Remote

As more stations come online and latency improves, remote operation is quickly becoming not just a backup resource but the primary way many hams operate. Whether you're chasing that elusive ATNO, taking part in a weekend contest, or simply checking 20 meters during a business trip, remote rentals offer flexibility, power, and excitement. So the next time you hear that faint "CQ DX," consider answering it—from the top of a mountain, a coastal cliff, or wherever the bands take you.



Below is a curated list of remote amateur radio station rental services available in the United States, including pricing details and key features:

### 1. Remote Ham Radio (RHR)

- Access: A national network of high-performance stations equipped with FlexRadio gear and large antennas.
- Pricing:
  - PremiumDX Plan: \$99/year or \$20/month, includes access to all stations.

- On-air time rates: \$0.05 to \$0.99 per minute, depending on station class and power level.
- Key features: Ideal for DXing and contesting; no hardware required; web-based control.
- Website: Remote Ham Radio

### 2. RemoteHams.com (RCForb)

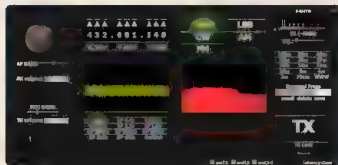
- Access: Community-driven platform with numerous remote stations, including those operated by clubs.
- Pricing: Free to use; some stations may require proof of license for transmit privileges.
- Examples:
  - K6PVR: Operated by the Pleasant Valley Amateur Radio Club; accessible via RemoteHams software.
  - N3PKJ: Personal station using a Yaesu FT-991; available during specific hours.
- Highlights: Ideal for casual operators; supports CW, SSB, and digital modes; desktop and mobile apps available.
- Website: RemoteHams

### 4. Web Radio Control

- Access: Software solution for remote station control, suitable for individual and club use.
- Pricing:
  - Basic: €30/year
  - Multimode: €50/year
  - Full: €75/year
  - Club: €150/year
- Highlights: Supports up to 4 radios, antenna control, CW and digital modes; web-based interface.
- Website: Web Radio Control

### 5. Amateur Radio Rentals

- Access: Physical rental of amateur radio equipment shipped to your location.
- Price Examples:
  - Kenwood TH-D74A: - \$28.95/week
  - Yaesu FT-817: \$28.00/week
  - Yaesu FT-991A: \$79.03/week
- : Ideal for temporary setups, field operations, or pre-purchase equipment testing.
- Website: Amateur Radio Rentals



### 6. EventCAST by The Radio Source

**Access:** Portable AM radio stations for temporary events, public information, or emergency use.

- Pricing: Customized quotes based on event requirements.
- Highlights: Self-contained systems with transmitter, antenna, and audio playback; used at trade shows, universities, and by emergency services.
- Website: EventCAST

"Wherever the signal reaches, connection begins — that's the power of remote radio."

### 3. RemoteTx

- Access: Designed for personal remote control of stations using a Raspberry Pi and compatible radios.
- Pricing:
  - \$40 for 6 months
  - \$70 for 12 months
- Highlights: Supports CW, SSB, and digital modes; includes a 30-day free trial. Website: RemoteTx

*Three days of radio, camaraderie, and passion.*

# Hamvention 2025

Every May, thousands of amateur radio operators mark a must-attend event on their calendars: Dayton Hamvention®. The 2025 edition—held from May 16 to 18 in Xenia, Ohio—once again exceeded all expectations. Three days filled with technology, learning, unforgettable encounters, and the unique atmosphere that only ham radio operators know how to create.

This year, several members of the Caribbean Amateur Radio Group had the privilege of attending, sharing with colleagues from around the world, enjoying the flea market, participating in forums, and, above all, experiencing the magic of amateur radio at its finest.

**Day 1 – Friday: Welcome to Equipment Paradise**

The sun was blazing and the humidity was intense, but nothing could dampen the excitement of the attendees. From the early hours, the flea market became a hive of activity. Endless rows of tables packed with vintage radios, modern transceivers, antennas, meters, towers, cables, kits, and rare technical finds that are hard to come by elsewhere. Many went home with real treasures... and some with more than they expected.

The aisles of the fairgrounds buzzed with greetings, reunions, and new friendships. It was common to hear phrases like “I haven’t seen you in years!” or “I recognize your voice on the air.” Because that’s an essential part of Hamvention: putting faces to the callsigns.

Among the standout forums, many rooms filled up with attendees eager to learn about portable antennas, the use of microcontrollers, and new technologies applied to amateur radio. The energy was contagious.





## Day 2 – Saturday: Youth, Forums, and Recognitions

With cooler temperatures but the same enthusiasm, Saturday brought some of the most memorable moments. The ARRL members' session gathered leaders who shared crucial topics: from defending the HF spectrum against commercial threats to the new DXCC Trident—a challenge that rewards those who achieve 100 entities in voice, CW, and digital. Without a doubt, a new goal for many.

The spirit of camaraderie could be felt everywhere. Conversations flowed across tables, hallways, and rest areas. Enthusiasts from different generations and regions shared tips, stories, building techniques, and memorable contacts. The passion for radio was in the air.

The Youth Rally was another highlight: young participants engaged in hands-on activities like foxhunting, satellite contacts, and testing portable radios. It was heartening to see that the next generation is already stepping in.

The day concluded with a moving presentation of the Lifetime Achievement Award to Dale Williams (WA8EFK), a true example of dedication and service in amateur radio.



## Day 3 – Sunday: Altitude, Science, and Farewell

Sunday, though shorter, was intense. Several dozen young attendees made 2-meter contacts with skydiver Carlos Ortiz (K9OL) as he descended from 14,000 feet, and later witnessed the launch of an APRS balloon, W1AW-11, which began its journey from Ohio toward the East Coast.



The final forums offered valuable insights on topics such as the relationship between amateur radio operators and public services, ARRL's role with the FCC, and the growth of radiosport. It was also a great opportunity to engage in dialogue with experts and fellow enthusiasts who share common interests.

At the end of the day, as exhibitors began to pack up their booths, attendees said their goodbyes with promises of future on-air contacts and reunions at upcoming events.



The magnitude of Hamvention is reflected in its more than 500 indoor exhibits and over 2,500 outdoor displays, showcasing the latest in amateur radio equipment, technology, related software and hardware, as well as rare accessories and gear. This vast array not only gives attendees the chance to explore cutting-edge innovations, but also turns the flea market into a true paradise for those in search of unique or collectible items.

A special note of pride for our group: during Hamvention, the induction of two great friends from the Caribbean Amateur Radio Group into the Heritage CQ Amateur Radio Hall of Fame 2025 was announced. Our dear member Angel Vázquez, WP3R, was recognized for his extraordinary work at the Arecibo Observatory and his tireless contributions to the world of amateur radio. We are also thrilled to see our personal friend, Professor Jim Breakall, WA3FET, receive this well-deserved honor for his outstanding career in antenna development. Congratulations to both!



### Final Reflection

Hamvention® 2025 was much more than an exhibition or fair. It was a meeting point where technology, tradition, friendship, and a vision for the future came together. A space where amateur radio operators—veterans, newcomers, technicians, operators, builders, and experimenters—united to celebrate their shared passion.

The members of the Caribbean Amateur Radio Group who attended agree on one thing: we returned home with new ideas, tools, friendships, and, above all, a renewed enthusiasm to keep on making radio.

**See you at Hamvention® 2026.**





# YAESU FTX-1

## Revolutionizing Amateur Radio with Versatility and Power

By: SWR Editorial Team

Yaesu once again surprises the amateur radio world with the launch of its new FTX-1 transceiver series, composed of the FTX-1 Field and FTX-1 Optima models. This series represents a significant evolution in portable and base station equipment, combining cutting-edge SDR technology, modular design, and unprecedented frequency coverage.

### Modular Design for Every Situation

Both models share the innovative "Field Head," a compact unit (21.3 x 8.9 x 5.6 cm) that allows operation in the field or as a base station. The FTX-1 Field comes equipped with a high-capacity lithium-ion battery (SBR-52LI, 6400mAh), while the FTX-1 Optima also includes a 100W RF power amplifier (SPA-1), making it a complete base station without the need for additional tools to connect.

### CExtensive Coverage and Modes for Every Preference

The FTX-1 continuously covers from 30 kHz to 174 MHz and from 400 MHz to 470 MHz, including the HF, VHF, UHF bands, FM broadcasting, the air band, and SWL. It supports all traditional and digital modes: SSB, CW, AM, FM, and C4FM, making it ideal for both traditional amateur radio operators and digital operation enthusiasts.

### SDR Technology and High-End Performance

Thanks to its SDR (Software Defined Radio) architecture, the FTX-1 delivers crystal-clear reception and transmission, supported by a high-resolution A/D converter and a powerful 32-bit DSP processor. Additionally, it integrates advanced features such as:



- 3DSS (3-Dimensional Spectrum Scope) on a 4.3-inch color touchscreen display.
- True dual reception with simultaneous HF/VHF/UHF combinations.
- Effective interference rejection with SHIFT, WIDTH, NOTCH, CONTOUR, APF, DNR, and NB controls.
- Powerful and clear audio thanks to its two large front speakers

#### Field Performance: Power and Endurance

The FTX-1 delivers 6W output (5W for QRP) with its internal battery, allowing up to 9 hours of operation in SSB and 8 hours in FM. When using an external 13.8V power source, output reaches 10W, ideal for extended outdoor operations. For those needing greater range, the SPA-1 amplifier enables 100W output when used as a base station.

#### Smart Features for the Modern Operator

Yaesu has equipped the FTX-1 with a range of practical functions that enhance the operating experience:

- MAG (Memory Auto Grouping) and PMG (Primary Memory Group) for quick frequency organization and monitoring.
- QMB (Quick Memory Bank) stores up to 10 configurations with a single touch.
- AMS (Automatic Mode Select), which automatically detects whether the mode is C4FM or FM.
- Compatible with WiRES-X (available starting August 2025).
- AGC, APRS, microSD slot, multiple USB ports, support for Bluetooth operation, and Yaesu active antennas (ATAS-120A, ATAS-25, FC-40).



#### Optional Accessories to Expand Its Capabilities

Yaesu also announced a line of optional accessories, including:

- FC-80 and FC-90: Automatic antenna tuners for 10W.
- SCF-1: Cooling fan.
- FGPS-5: GPS antenna.
- BU-6: Bluetooth module.
- SPG-1: Chassis protector for the Field Head.

#### Conclusion

The Yaesu FTX-1 is now available for amateur radio operators seeking a truly all-terrain transceiver, and it promises to become a benchmark in the world of portable and base station communications. With its modular design,

which allows you to switch from a portable field operation of 6 to 10 watts to a 100-watt base station without the need for tools, the FTX-1 redefines versatility in modern amateur radio.

Designed for both DX enthusiasts and operators who enjoy outdoor activations, contests, digital communication, or exploring airband and broadcast frequencies, the Yaesu FTX-1 is a reliable, robust, and technologically advanced tool. Now available through major dealers, this new Yaesu equipment marks an important milestone in the evolution of SDR transceivers and offers operators an unprecedented experience both in the shack and in the field.



# *On-Air Vacations: Top U.S. Destinations for Passionate Amateur Radio Operators*



By Yanira Maldonado WP4QOE

For amateur radio enthusiasts, a vacation doesn't mean completely disconnecting, but rather an opportunity to explore new horizons... on the air. Fortunately, there are tourist destinations in the United States (and nearby) that not only offer spectacular landscapes and unique cultural experiences but also HF/VHF radio stations equipped and ready to use. Today, we present a list of stations in the United States and the Caribbean available for rent or operation, where you can combine the pleasure of traveling with your passion for the airwaves.

## **1.W7RN – Comstock Memorial Station (Nevada, USA)**

Located near Virginia City, this world-class station is well-known among contest radio operators. It is equipped with high-gain directional antennas and state-of-the-art equipment. You can stay nearby and book operating shifts at the station. Ideal for those seeking extreme DX performance.

## **2. K3LR – Western Pennsylvania**

One of the most iconic contest stations in North America, K3LR is not usually available for public rental but offers special visits and experiences for amateur radio groups. If you belong to a club or society, it's worth exploring the possibility of a coordinated visit.

# *"For amateur radio operators seeking adventure without disconnecting from their passion."*

## **3. PJ2T** – Curazao (Caribe n3. PJ2T – Curazao (Caribbean)

Just a few hours by plane from the U.S., this station is open for rental and highly sought after by operators wanting to activate from the Caribbean. Operating from PJ2T is not only a dream because of its power and antennas but also for being located on a paradise island with stunning beaches.

## **4. WIAW** – ARRL Headquarters (Newington, Connecticut)

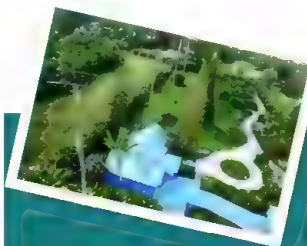
Not a rental station, but any ARRL member can visit and operate from the legendary WIAW with prior notice. It's an iconic experience for any amateur radio operator and a great excuse for a getaway to the Northeast.

## **5. ZF1EJ** – Grand Cayman (Cayman Islands)

Another ideal Caribbean option, with local operators offering fully equipped private stations for rent. Grand Cayman combines luxury tourism, world-class diving, and excellent HF propagation.

## **6. KH6YY** – Hawaii (Oahu)

Operating from Hawaii is a special experience thanks to its unique location. The KH6YY station has been used in multiple international contests and may be available for experienced operators. A paradise both on land and on the bands.



**RBook in advance:** Some stations require early requests and verification of your operator experience. Also, certain stations need prior coordination, especially if contests are approaching.

**Respect the equipment:** These stations are valuable; operate carefully and follow the host's rules.

**Combine tourism and radio:** Plan time to explore the location, not just operate.  
Tips before booking:

**Valid license:** Make sure your radio license is recognized in the destination country. Many countries have CEPT agreements or arrangements with the U.S.

## **Conclusion:**

For the true amateur radio operator, every trip is an opportunity to make new contacts, explore propagation conditions, and experience radio in a whole new way. These destinations will not only feed your travel spirit but also fuel your passion for communications. So prepare your logbook, tune your antenna... and let the adventure begin!



# DXpeditions

By: SWR Editorial Team

## AMATEUR RADIO EXPEDITIONS THAT WILL MAKE HISTORY IN 2025

The world of amateur radio never stops, and 2025 promises to be an exciting year for those who enjoy DX, distant signals, and global camaraderie. From remote islands to barely activated territories, several international teams are gearing up to bring their portable stations to some of the most challenging corners of the planet. These expeditions represent not only a technical and logistical challenge but also an opportunity for operators worldwide to add unique contacts to their logbooks. In this article, we explore the most anticipated activations, the most coveted destinations, and the human stories behind each antenna raised in the middle of nowhere.

### 9U1RU Burundi

The 9U1RU team will be active from Burundi from October 31 to November 17, 2025. Team members: R7AL, OK8AU, RW9JZ, W8HC, SP9EQZ, RU3UR, UA3QLC, R2BW, R5EC.

#### Burundi: A Journey to the Heart of Africa

Experienced travelers who have seen much in their journeys often prefer extreme and impressive adventures over leisurely relaxation. The Republic of Burundi, located in Central Africa, is ideal for such purposes. Here, you won't find luxury hotels with lavish rooms, but tourists will discover something truly interesting: an introduction to nature

wild and ancient rituals of the local people. Few know this African country well. This is not surprising, since the majority of the population lives in absolute poverty and depends on agriculture to survive. It is the poorest country in the world and the most densely populated in Africa. Over 10 million people live in a small area, with 70% forced to live on less than one dollar a day.

#### What should you know about Burundi?

The country is small and landlocked but borders Lake Tanganyika to the southwest. Its neighbors are Rwanda, the Democratic Republic of the Congo, and Tanzania. It takes only about half an hour to travel from Rwanda to Burundi. There are practically no paved roads or railways in the country, but there is an international airport whose architecture resembles a space station from a sci-fi movie. In the native language, the country is called "Kirundi." Bujumbura is the capital and largest city.



## T88HR KOROR ISLAND



T88HR will be active again from Koror Island, IOTA OC-009, Palau, from June 6 to 11, 2025. The operation will be on SSB bands from 80 to 10 meters. Recent DX observations of T88HR. QSL via JHIMLO.

Paradise is found on Koror Island, Palau

Koror Island, formerly known as Corrora Island, is an integral part of Palau. This charming vacation destination is located in the western Pacific. Koror's landscape is partly volcanic and partly coral limestone, uplifted from the seabed.

Koror Island was under Japanese administration until 1944 and had a population of approximately 30,000 at that time. It was devastated during World War II but emerged as a popular tourist and commercial center. The harbor has extensive natural anchorages, and Koror is home to nearly 75% of Palau's population.

### Did you know?

A concrete bascule bridge once connected Babelthap with Koror. In 1977, it was the longest bascule bridge in the world. It collapsed, disrupting the country's water, transportation, and communication networks. A pontoon bridge was used until 2002, when a new suspension bridge was completed.

### The Energy of Koror

The atmosphere in Koror is dynamic and lively. Workers come from nearby villages and even from the Philippines seeking employment. This cultural exchange enriches the community with diverse stories and traditions. Koror is densely populated, making it too busy for those seeking a quieter retreat. While Koror Island itself isn't especially picturesque, visitors still come to experience it and get a glimpse of the future of life in these Pacific island regions.



## FFS/K9EL St. Martin Island

John, FFS/K9EL, will be active from St. Martin Island, IOTA NA-105, from June 4 to 18, 2025. He will operate on 160 to 6 meters.

St. Maarten is a true Caribbean treasure!

St. Martin was inhabited by the Arawak people (Amerindians) before Columbus' famous discovery and was known as the "Island of Salt." This name was given due to the abundance of salt deposits on the island. As soon as the Americas were discovered in 1492, the territory was renamed St. Martin and was included on world maps on November 11 of that same year. A century and a half later, the first settlers — Dutch and French — established themselves on the island, and since then so they have coexisted peacefully for over 400 years. The treaty they signed in 1648 is one of the oldest treaties still in effect today.

### Geographical and Political Location of the Island

St. Martin is part of the Caribbean archipelago and sits on an underwater volcano. The island is bordered by the Caribbean Sea to the west and the Atlantic Ocean to the east. Its coastline stretches a total of 58.9 kilometers and features nearly 40 beaches. The shoreline is framed by small coral reefs and lagoons.

The uniqueness—and something of a record—of St. Martin is that it is the smallest inhabited island in the world. Its surface area is just 87 km<sup>2</sup>. But that's not all! This territory has two capitals: Marigot and Philipsburg, thanks to the treaty between France and the Netherlands. The southern part belongs to the Netherlands, while the northern part is French and part of the European Union.



# El rincón de la nostalgia

## Yaesu FT 7 / FT 7B:

*The voice of the past that still transmits with power.*

In the golden age of amateur radio, when the HF bands were veritable highways of distant voices and discoveries, the Yaesu FT 7 and its successor, the FT 7B, became inseparable companions for many radio amateurs. Compact, robust, and with a clean design, this 10 watt transceiver (or 50 watt for the FT 7B) It represented

the perfect gateway to the world of DX without the need for extensive equipment.

The original ad, lovingly and carefully recovered from an Italian blog, reminds us of an era where every contact was celebrated as a small miracle. Yaesu promised Japanese reliability and solid performance in an affordable package, and it more than delivered. Today, although eclipsed by digital technology, the FT 7 still ignites a spark of nostalgia: the warmth of the tubes, the click of the dial, and that signal that crossed oceans.

An analog gem that, even today, with its AM and CW soul, remains a collector's item...



**FABULOUS YAESU BARGAIN!** Never to be repeated offer, but only while stocks last!

Incredible FT-7 novice/mobile rig slashed to only... **\$535**

DSK 416 CAT D-2886

**DKK SMITH ELECTRONICS**

SEE OUR OTHER ADS IN THIS ISSUE FOR STORE ADDRESSES

By: SWR Editorial Team

*The Nostalgia Corner*

# New members named to Heritage

## CQ's Amateur Radio Hall of Fame

The CQ Heritage Amateur Radio Hall of Fame, created by veteran amateur radio editor Richard Ross, K2MGA (SK), will continue to honor amateur radio operators in a new section of the Hamgallery.com website.

CQ Magazine ceased publication in October 2023. Ross died on April 27, 2024, and the change was made with the permission of his widow, Cathy.

The CQ Heritage Amateur Radio Hall of Fame honors licensed and unlicensed radio operators who have significantly contributed to amateur radio, their professional careers, or any other aspect of international life. A select and diverse group of amateur radio operators will manage the new website and review nominations.

### The new members for the year 2025 are:

#### **Professor Jim Breakall, WA3FET.**

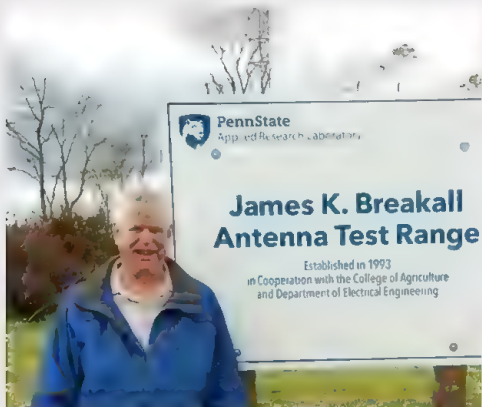
Dr. Breakall's work has been instrumental in the development of amateur radio antenna technology for decades. He is the author of numerous peer-reviewed scientific articles and books. He is a Life Fellow of the IEEE and the Radio Club of America (RCA), and has been awarded the Sarnoff Prize, the RCA Dr. Ulrich L. Rohde Technical Award, and the Dayton Hamvention® Technical Achievement Award.

#### **Ángel M. Vázquez, WP3R.**

Vázquez graduated from the City University of New York. He worked at WNYC as a radio engineer before returning to Arecibo, Puerto Rico, and in 1977 accepted a position at the Arecibo Observatory, where he rose to become head of telescope operations. He has presented numerous talks about the Arecibo Observatory and his experiences as an amateur radio operator at the Hamvention® Antenna Forums in Dayton, the RCA lecture series, HamSci conventions, and various amateur radio clubs around the world. He was awarded Puerto Rico's Amateur Radio of the Year in 2017.

#### **Wayne Overbeck, Ph.D., N6NB (SK).**

Overbeck was the co-inventor of the Quagi antenna, which is part quad-band and part Yagi. He was active in amateur radio for over 68 years, a communications law professor and textbook author, and an expert on DX and contests.



Taken from: <https://www.arrl.org/news/heritage-cq-amateur-radio-hall-of-fame-inductees-named>

AMATEUR RADIO UNITES THE WORLD WITH INVISIBLE WAVES  
AND LASTING FRIENDSHIPS.

# QSLWorld.com

## A Modern Tool for Viewing and Sharing Your QSOs



In the digital age, radio amateurs have increasingly more tools to facilitate contact management and make the hobby more dynamic. One of the most exciting new features is QSLWorld.com, a free web platform that allows you to view your QSOs on an interactive map and manage your contacts in a simple and intuitive way.

### What is QSLWorld?

QSLWorld.com is an online tool designed specifically for radio amateurs. Its main objective is to help you view all the contacts you've made during your radio activities on a world map, using your ADIF (.adi) files.

The site uses artificial intelligence and relies on the QRZ.com API to enrich the information for each contact. This allows you to have a more complete visual and analytical experience of your activity as an operator.

### How does it work?

The process is very simple:

1. Export your ADIF file from your preferred logging software (such as Ham Radio Deluxe, N1MM Logger, Log4OM, etc.).
  2. Visit <https://qslworld.com/> from your browser.
  3. Upload the .adi file using the corresponding button on the page.
- The platform will automatically process your QSOs and display them on an interactive map, where you can see:
- Location of each contact.
  - Operator information (taken from QRZ.com).
  - Statistics and filters by bands, modes and dates.

You don't need to register or install additional software. Everything happens online, quickly, and without complications.

### QSL Card Design

One of the most striking additional features is the integrated QSL card design studio. From the same platform, you can create your personalized cards and email them directly to your contacts. This saves time and money, especially if you prefer to avoid physically mailing printed cards.







## Why use QSLWorld?

- Easy to use: Upload your log and get instant results.
- Accessible from anywhere: All you need is a browser.
- Attractive visualization: Your QSOs on a world map, perfect for presentations, clubs, or simply keeping a visual record.
- Personalized digital QSL: Create your cards in minutes.
- Integration with QRZ: Enriched information about your correspondents.



## Ideal for...

- Amateur radio operators who participate in contests.
- DX stations looking to showcase their global reach.
- Portable or expedition operators.
- Educators and clubs wanting to teach geography and worldwide interconnection using radio.

QSLWorld.com represents a new generation of tools that combine the tradition of amateur radio with today's technological capabilities. Visualizing your QSOs has never been easier, more practical, or more elegant.

If you haven't tried it yet, we invite you to visit [www.qslworld.com](http://www.qslworld.com)

## Reasons to use QSLWorld

**Map visualization:** Displays all your QSOs on an interactive world map, making it easier to analyze and showcase your contacts.

**Easy log upload:** Simply upload your ADIF (.adi) file, and the system automatically processes the information.

**100% online:** No software installation or registration needed; it works directly from your browser.

**Integration with QRZ.com:** Enriches your contacts with operator data and images pulled from QRZ.

**QSL card design:** Allows you to create and send personalized QSL cards via email right from the platform.

**Fast and free:** Completely free to use with almost instant processing.

**Statistics and filters:** Explore your QSOs by bands, modes, or dates—ideal for tracking or presentations.

**Perfect for DX and expeditions:** Great for showcasing your global reach after an activation or special event.



By: SWR Editorial Team

# Demystifying the ALC and the Processor for Optimal HF Performance

Unlock the full potential of your HF transceiver by understanding and properly using the Automatic Level Control (ALC) and the Processor.

By Juan Montijo WP4OV

These often overlooked functions can significantly improve the clarity and power of your signal on the air. Let's explore their purpose and how they work together.

## The Purpose of the ALC:

Automatic Level Control is a crucial circuit designed to prevent overdriving the final amplifier stage of your transmitter. Overdriving leads to several undesirable effects, including:

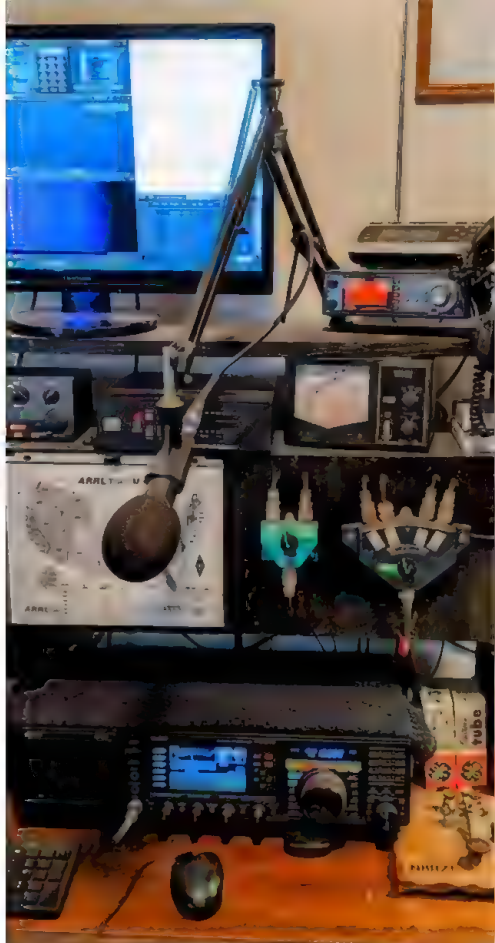
- **Splatter:** The generation of unwanted signals on frequencies adjacent to yours, causing interference to other operators.
- **Distortion:** Degradation of the quality and intelligibility of your transmitted audio.
- **Damage:** Potential harm to the expensive transistors or tubes in the final amplifier.

## How the ALC Works:

The ALC circuit monitors the output power of your transmitter. If the power exceeds a safe level, the ALC generates a negative voltage that feeds back to the earlier stages of the transmitter, reducing gain and thus the drive to the final amplifier. Think of it as an automatic volume limiter for your transmitted signal. The goal is for the ALC to be just barely active at voice peaks, indicated by a slight deflection on your radio's ALC meter.

## The Role of the Processor:

The Processor, often an audio compression or voice processing circuit, aims to increase the average power of your transmitted voice signal. Human speech has a high peak-to-average power ratio, meaning the loud parts of your voice are much more intense than the softer parts. A processor compresses this dynamic range, making the softer parts louder relative to the peaks.



### Proper Use of the Processor:

By increasing the average power, a properly adjusted processor can:

- **Improve Intelligibility:** Make your signal easier to understand, especially in noisy conditions or for distant stations.
- **Increase Perceived Power:** Give your signal a stronger presence at the receiving end.

However, over-processing is harmful. It can lead to:

- **Increased Distortion:** Making your voice sound unnatural and hard to understand.
- **More Splatter:** Widening your transmitted bandwidth and causing interference.

### How the ALC and Processor Work Together:

The ALC and Processor are closely linked. When you enable the processor and it raises the average audio level, it also increases the peak levels driving the final amplifier. This is where the ALC comes into play. It detects these increased peaks and automatically reduces the drive to prevent overdriving.

### The Key to Proper Adjustment:

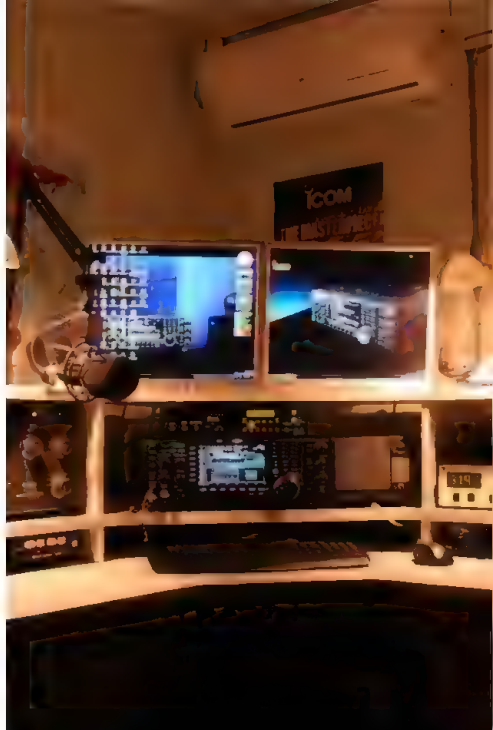
The ideal setup involves using just the right amount of processing to achieve a noticeable improvement in your signal without overdriving the ALC. Here's a general guide:

Start with the processor off. Adjust your microphone gain so that the ALC meter barely flickers at the strongest voice peaks. Gradually turn on the processor. Increase the processing level while watching the ALC meter.

Try to achieve a slight increase in ALC activity at voice peaks compared to when the processor is off. If the ALC meter is constantly high, you are likely over-processing. Listen to your transmitted signal on a monitoring receiver or ask a trusted contact on the air for feedback on your audio quality.

By understanding and carefully adjusting your ALC and Processor, you can optimize your HF signal for maximum clarity and effectiveness, ensuring enjoyable and interference-free operation on the amateur bands.

Properly understanding and adjusting the ALC and Processor not only improves the quality of your transmission but also reflects a responsible commitment to the efficient and ethical use of the amateur radio spectrum. A clear, intelligible, and interference-free signal is the result of an operator who masters not only their equipment but also the art of HF communication.







## Uniting the World Through Amateur Radio

# WWA WORLD WIDE AWARD

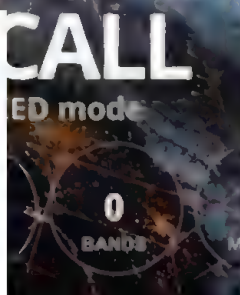


**World Wide Award (WWA):**  
*Connecting the World Through Amateur Radio*

Amateur radio has long been a bridge between cultures, languages, and continents. In this spirit of global connection, the World Wide Award (WWA) was born—an initiative that has revolutionized how amateur radio operators interact and compete internationally.

What is the World Wide Award?

The WWA is an international amateur radio event aimed at bringing together the greatest number of countries in a single activity, excluding the well-known global contests. Organized by the HamInnovation team, experienced in managing the WRTC 2022, the WWA has become the leading amateur radio event in terms of number of QSOs and activators.



### Dates and Event Format

The WWA is held twice a year:

- January: A one-month edition, from January 1 to 31.
- July: A one-week "Sprint" edition, from June 30 to July 6.

These editions allow participants to plan their involvement and maximize their contact opportunities.

# WORLD WIDE AWARD



## Participation and Rules

Participants can join as "activators," operating special stations, or as "chasers," contacting these stations during the event. No prior registration or QSO confirmations are required; everything is managed automatically through the HamAward.cloud platform.

To obtain the WWA award, a minimum of 100 points is required, which are accumulated as follows:

- CW: 10 points for each QSO on each band.
- SSB: 5 points for each QSO on each band.
- DIGI: 2 points for FT8/FT4, 3 points for RTTY/PSK on each band.

The awards are issued in high-resolution digital format and are available for download at the end of the event.

## Impact on the Amateur Radio Community

Since its first edition in January 2024, the WWA has experienced continuous growth. In a single edition, more than 3.7 million QSOs were logged in one month, with participation from over 150,000 operators across more than 250 countries.

This event has proven to be an effective platform to encourage global participation, promote friendship among amateur radio operators, and celebrate cultural diversity through the airwaves.

## Technology and Organization

All WWA technology is managed by HamAward.cloud, a platform renowned for its ability to organize large amateur radio events. The platform enables the automation of activator coordination and provides real-time data and information, which is essential for the success of the event.

## Conclusion

The World Wide Award represents a new era for amateur radio, where technology and the passion for communication come together to create a unique and enriching experience. It is an open invitation to all amateur radio operators worldwide to connect, share, and celebrate the magic of the airwaves.

For more information and details about upcoming editions, you can visit the official WWA website: [hamaward.cloud/wwa](https://hamaward.cloud/wwa).



# JOIN ARES

## AMATEUR RADIO VOLUNTEER SERVICE FOR THE COMMUNITY



## ARES

The Amateur Radio Emergency Service (ARES) represents a unique opportunity for licensed amateur radio operators who wish to put their skills and equipment to work for their community. Composed of dedicated volunteers, ARES is activated to provide vital communications during disasters and emergency situations, ensuring that information flows when it is needed most.

In critical moments, when traditional communication channels may fail, ARES becomes an indispensable pillar, supporting emergency management agencies and the public. Its mission is simple but powerful: to save lives and keep the community connected.

Currently, ARES is seeking to expand its volunteer network in the northern municipalities of Puerto Rico, specifically in:

Quebradillas, Camuy, Hatillo, Arecibo, Barceloneta, Manatí, Vega Baja, Florida, Morovis, Ciales, Utuado, and Lares.

### Who can participate?

- Licensed amateur radio operators interested in being part of an organized emergency communications network.
- People eager to learn and serve their community, willing to receive ongoing training and education.
- Citizens committed to the well-being of their region, ready to act when needed.

### What do you need?

- Your interest and commitment.
- Time and willingness to participate in local and emergency activities.
- Completion of a short registration form.

### How to join?

You can get more information by contacting:

**Mr. Néstor T. Correa / WP4PRD**

Emergency Coordinator (EC) Northern Area

Email: [wp4prd@gmail.com](mailto:wp4prd@gmail.com)

Or simply download and complete the official form:

ARES Volunteer Registration Form

Then, send it to your local coordinator or visit:

[www.ares.org](http://www.ares.org)

### Why participate?

Being part of ARES not only means preparing for emergency situations, but also building bonds with other amateur radio operators, participating in community activities, and being a valuable resource for your community. Your help can make a difference.





# Kenwood TS-590SG

By: SWR Editorial Team

The TS-590SG is a reminder that in amateur radio, reliability and proven performance can matter more than the latest technological innovations.



## IS THE KENWOOD TS-590SG STILL RELEVANT IN THE DIGITAL AGE?

The TS-590SG is an HF/50 MHz transceiver that stands out for its robustness and performance. Its design includes a double conversion superheterodyne receiver with 500 Hz and 2.7 kHz roofing filters, allowing it to handle strong adjacent signals without distortion. The implementation of a DDS (Direct Digital Synthesizer) instead of a traditional PLL/VCO improves the signal-to-noise ratio, offering clearer reception even in challenging conditions.

The 32-bit digital signal processing (DSP) enables advanced AGC control from the IF stage, resulting in audio quality that reduces fatigue during long listening sessions. Additionally, it features noise reduction functions NR1 and NR2, with the latter being especially effective for CW operations.

### Comparison with Modern Models

Although the TS-590SG lacks some modern features like touchscreens or real-time spectrum displays, it offers comparable performance in terms of sensitivity and selectivity. Its “old-school” design with buttons and knobs may be preferred by operators who value simplicity and reliability.

Compared to models like the Icom IC-7300, which incorporates SDR features and a more modern interface, the TS-590SG remains competitive thanks to its build quality and RF performance.

In a world where amateur radio transceivers constantly evolve with touchscreens, SDR features, and advanced connectivity, the Kenwood TS-590SG, released in 2014, remains a solid and reliable choice for many operators.



The Kenwood TS-590SG demonstrates that quality design and solid performance remain just as relevant as the latest technology in the world of amateur radio.

# Kenwood TS-590SG

## Additional Features and Usability

The TS-590SG includes useful features such as a Morse code decoder, automatic tuning in CW mode, and a mode-configurable equalizer. Its USB interface allows full control from a PC using the ARCP-590G software, facilitating integration into modern stations.

Additionally, its robust design and efficient cooling system make it suitable for prolonged operations without the risk of overheating.

## Conclusion

In an environment where amateur radio transceivers are increasingly defined by features like touchscreens, SDR (software-defined radio) architecture, and internet connectivity, the Kenwood TS-590SG demonstrates that solid engineering, audio quality, and RF performance still have a very important place in the modern shack.

Although it was released more than a decade ago, this rig maintains its relevance thanks to its excellent receiver, efficient digital filtering, low noise floor, and ability to handle strong signals without distortion—something that even some newer models have yet to match in certain aspects.

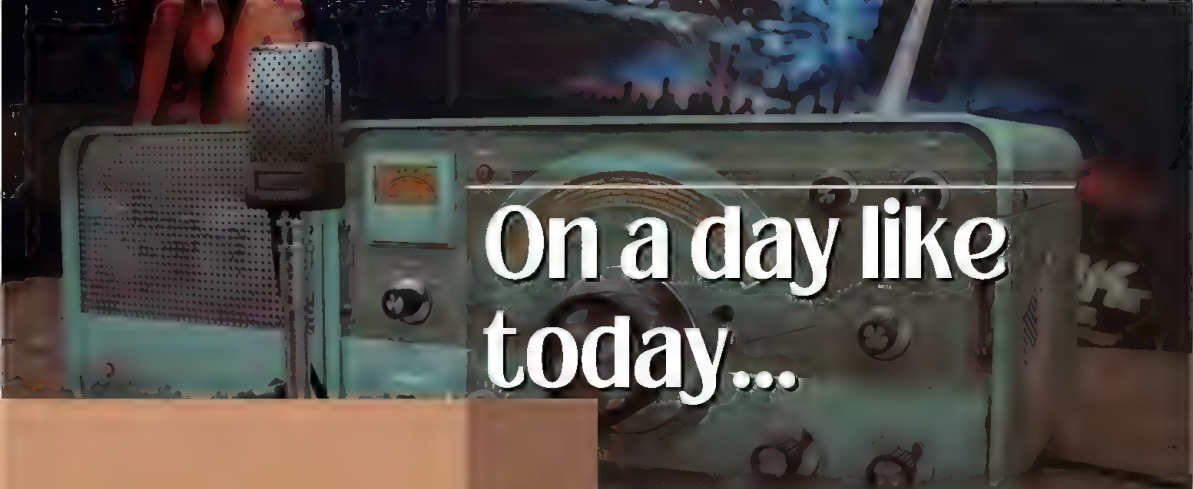
Its traditional design, with intuitive physical controls and a sturdy build, makes it a reliable tool for operators who prioritize the classic operating experience but want the advantages of modern digital processing.

While it lacks flashy visual elements like a waterfall display or a touchscreen, it compensates with stability, clear audio, customization capability, and easy PC software integration via USB.

For the amateur operator who values effective operability over appearance or fleeting technology trends, the Kenwood TS-590SG remains a smart investment. It is a testament to how well-designed functionality can stand the test of time, remaining a fully relevant and competitive option amid today's communication challenges.

## Key Features of the TS-590SG

- Excellent receiver performance with outstanding handling of strong signals thanks to its 500 Hz roofing filter.
- 32-bit DSP processing, ideal for improving clarity in QRM and QRN conditions.
- Advanced split operation and dual VFO, useful for working DX and quickly changing frequencies.
- Auto CW Tune and Morse decoding, perfect for CW contests.
- Voice and CW memories that save effort and speed up repetitive contacts.
- USB control and free software, compatible with contest programs like N1MM Logger+.
- NR2 (line enhancer) to improve very weak signals without distortion.



# On a day like today...

By: SWR Editorial Team

## Historical Events in Amateur Radio (May – July)



- ◆ May 18, 1920 – First Transatlantic Contact by Amateur Radio Operators

Amateur radio operator Paul Godley (2ZE) conducts experiments in Scotland that confirm the possibility of transatlantic shortwave communications

- ◆ May 27, 1933 – Founding of IARU Region 2 (America)

The International Amateur Radio Union (IARU) expands its organization to represent amateur radio operators across the American continent

- ◆ June 1, 1968 – FCC Allows SSB Use on All HF Bands (USA)

The Federal Communications Commission officially authorizes the use of single sideband (SSB) modulation, modernizing HF communications.

- ◆ June 12, 2009 – Amateur Radio Operators Assist During Honduras Earthquake

After the magnitude 7.3 quake, Honduran and Central American amateur radio operators restored emergency communications in affected areas.

- ◆ July 5, 2003 – Amateur Radio Operators Activate Emergency Stations in France

During the historic heatwave in Europe, French operators collaborated with authorities by transmitting critical information.

- ◆ July 15, 1983 – Launch of OSCAR-10 Satellite

This satellite, built by amateur radio operators, enabled international communications in Earth orbit, marking a new era in satellite amateur radio.





# Nano VNA

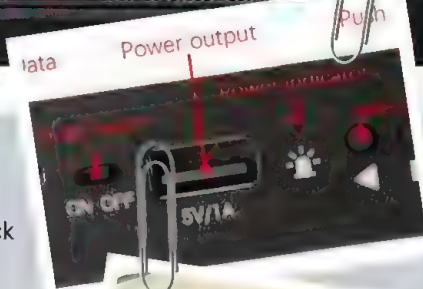
An Essential Tool in an Amateur Radio Shack

For years, I had heard about the NanoVNA, one of those tools many considered essential for every serious amateur radio operator. I knew it existed and that it was useful for antenna tuning, but I had never used one... until recently. And I must say, since I got it, there's no turning back. The NanoVNA-F V2 has not only exceeded my expectations but has become a fundamental piece in my amateur radio shack.

In this article, I want to share with you a comprehensive review of this device, based both on its technical specifications and my practical field experience.

## What is the NanoVNA-F V2?

The Chelegance NanoVNA-F V2 is a next-generation, portable, and fully standalone vector network analyzer (VNA). It's based on the famous edy555 and Ow0Comm design but improved with an aluminum case, a 4.3-inch IPS touchscreen, and a 5000 mAh battery that provides up to 7 hours of continuous operation.



This small but powerful device measures various fundamental parameters essential for all antenna tuning and analysis work: SWR, impedance, resonance, phase, Smith chart, polar plot, among others. And it does so with remarkable accuracy.

### Key Technical Features

- Frequency range: 50 kHz – 3 GHz
- S21 dynamic range: >70 dB up to 1.5 GHz, >60 dB up to 3 GHz
- Display: 4.3" IPS LCD, 800x480 pixels, touchscreen
- Connectors: Female SMA
- Battery: Li-Po 3.7V, 5000 mAh (included and rechargeable)
- Interface: Touchscreen + 3 side buttons
- Size: 125mm x 75mm x 20mm (compact and sturdy)
- Measurements: S11, S21, VSWR, impedance, phase, Smith chart, etc.
- Compatible software: NanoVNA-Saver (for deeper analysis on PC)

Includes SMA coaxial cables, a complete calibration kit (Open/Short/Load), various SMA adapters, USB-C cable, and a stylus for precise touchscreen operation.

**My Experience:** From Ignorance to Amazement

### First Encounter

As I mentioned before, I had never used a VNA. I knew it existed, had read articles, watched some YouTube videos, but for some reason, I had never dared to try it—until I decided to invest in the NanoVNA-F V2.

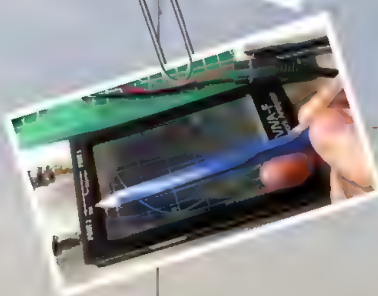
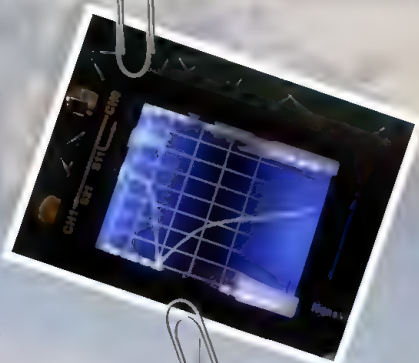
The first thing I noticed was its excellent presentation. It comes with everything needed to get started: cables, adapters, manual, and a quite intuitive interface. Within minutes, I was already exploring the SWR graphs and adjusting a dipole antenna I had in the backyard.

### Applications in My Shack

In my amateur radio shack, conditions vary quite a bit. I have installed and tuned Yagi, dipole, cubical, and vertical antennas. Each requires fine adjustments, and the NanoVNA has given me the ability to do it in situ with millimeter precision.

I have used it to:

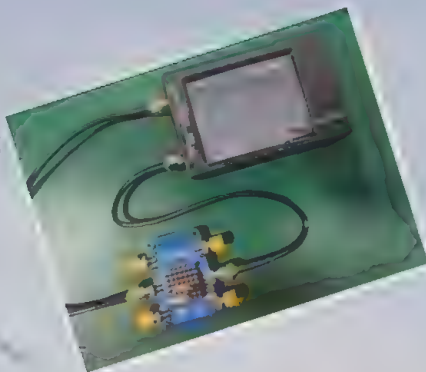
- Measure the exact resonance point of my antennas
- Observe the SWR behavior across the bandwidth
- Tune elements of a multiband Yagi
- Confirm if the impedance at the feed line really was 50 ohms
- Check if an old antenna was still in operating condition



## Learning

The learning process was surprisingly fast. Although the first calibration took me a while (you really have to carefully follow the Open, Short, and Load steps!), once I understood the process, everything became intuitive. I highly recommend reading the manual and watching some online tutorials.

Additionally, the NanoVNA-Saver software allows connection to a computer for even more detailed analysis, saving measurements, comparing traces, and exporting data.



## The Good and What Can Be Improved

### Advantages

- Fully portable
- 7-hour autonomy with its 5000 mAh battery
- Large touchscreen display
- Very comprehensive measurements (VSWR, S11, S21, Smith chart, etc.)
- Includes everything needed to calibrate and operate from day one
- Compatible with software for deeper analysis

### To Consider

- ! Can be intimidating at first for absolute beginners, but with practice it becomes manageable.
- ! The included manual could improve its Spanish wording, but there are excellent online resources.
- ! Firmware updates are recommended for the best experience (very easy to do via USB!).



### Who Do I Recommend It To?

To every amateur radio operator, without exception. Whether you use homemade or commercial antennas, enjoy experimenting, or want to make sure you're transmitting efficiently without losing power... this device is for you. It doesn't matter if you operate on HF, VHF, or UHF; the NanoVNA-F V2 will provide valuable information and open up a world of possibilities. It's ideal for both beginners and veterans who want to measure accurately without spending hundreds or thousands of dollars.

### Conclusion

The NanoVNA-F V2 has allowed me to go from adjusting antennas "by instinct" to doing it with science and precision. It is, without a doubt, one of the best investments I have made in my life as an amateur radio operator. Having it handy in my shack has enabled me to fix problems I didn't even know existed and get the most out of my antennas.

If you're considering getting one, don't think twice. It will become your new best friend in the world of radio. And like me... you'll wonder how you ever lived without it all this time.

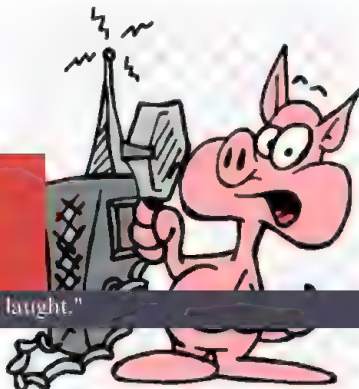


## The Shack of Laughter

# FUN WAVE

"Because amid all the QRM, there's always room for a good laugh."

### QSL with humor

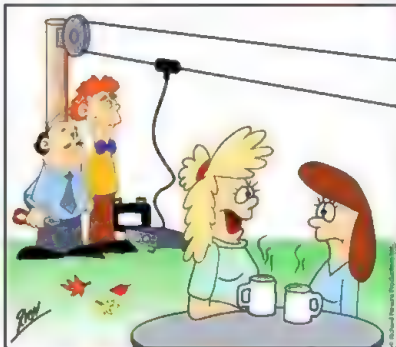


- Did you hear about the two antennas that got married? The ceremony wasn't much, but the reception was great!
- How does a radio operator send his partner a break-up message?  
-Remorse Code.
- A young lady has a date with a ham. They are sitting at the dinner in a romantic restaurant. She asks "so what is your favorite band?" And he replies "7 MHz!"
- Old hams don't die, they just become better grounded.



### SUCH A HAM

SH-005



Stan & Cliff have been working all day on installing my clothesline, Mary.



Being an amateur radio operator is more than just talking on the radio; it's about helping others reach new frequencies... and new dreams.

# AMATEUR RADIO STORIES

## Voices That Cross the Horizon Puerto Rican Pioneer in Amateur Satellite Communications

Rafael Bonano, known by his distinctive callsign KP4RV, is a prominent figure in Puerto Rican amateur radio, especially in the field of satellite communications. With over four decades of experience, he has combined his passion for radio with an unwavering commitment to education and technological innovation.

KP4RV has been admired on the airwaves for his dedication since 1983. A resident of Luquillo, Puerto Rico, he has devoted himself to this fascinating hobby, blending his technical expertise with a strong community commitment.

During his service in the United States Army, Bonano specialized in RTTY communications, serving in countries such as Germany, Korea, and Japan

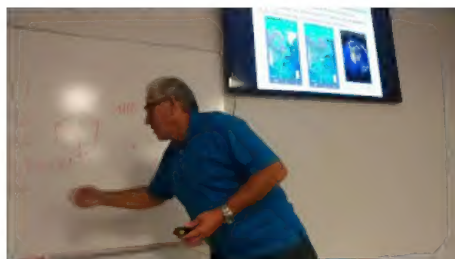
and the United States. This international experience enriched his perspective and skills in the field of communications.

In Puerto Rico, Bonano has been an active member of the ARRL/VEC Puerto Rico VE Group, collaborating in the administration of licensing exams for new amateur radio operators. His participation has been fundamental to the growth and training of new enthusiasts on the island. Additionally, he has competed in international contests such as the CQ WW WPX SSB Contest, representing Puerto Rico in the SOSB 20m LP category. His dedication and passion for amateur radio have made him a role model and mentor for many in the community.



Bonano has been a fervent promoter of the use of satellites in amateur radio, actively participating in events and networks that promote this modality. His educational work is reflected in presentations such as the one given on the BrandMeister EA Telegram channel, where he offered an introduction to amateur radio satellites, sharing his knowledge with an international audience.

Additionally, he has led sessions on the Radio Operators of the East (RODE) Network, addressing topics such as the use of satellites and the transmission of SSTV images from the International Space Station, demonstrating his commitment to training new radio amateurs. His dedication and experience have made Rafael Bonano a leader in the amateur radio community, inspiring many to explore the possibilities offered by satellite communications.



A good radio amateur, like Rafael Bonano KP4RV, is defined not only by his technical skill or operational experience, but by his generous spirit of mentorship and service. Rafael has distinguished himself as a true ambassador of satellite communications, dedicating time and effort to teaching others how to operate amateur radio satellites, from the basics to more advanced techniques. His patience, clarity of explanation, and willingness to accompany beginners during their first satellite contacts have been key in inspiring and training new generations of radio amateurs. Thanks to his work, many have discovered a new world of possibilities in amateur radio, literally connecting with space from their own backyards.



"Amateur radio is much more than a signal that crosses the air: it's a bridge between generations, a school without walls, and a community without borders. Being a good radio amateur, as Rafael Bonano KP4RV demonstrates, is sharing knowledge with humility, inspiring by example, and igniting the spark of curiosity in others. Every time we help someone make their first satellite contact, we connect not only with a satellite in orbit, but also with the future of this exciting art. Because in the end, the most valuable thing we can transmit is not a signal... but the desire to learn and to serve."



In conclusion, Rafael Bonano KP4RV embodies the true spirit of amateur radio: knowledge, passion, and service to others. His commitment to promoting satellite communications and his constant willingness to teach and guide others make him a role model within the community. Thanks to his work, he not only strengthens the technical capabilities of those around him, but also fosters the bonds of camaraderie and collaboration that make amateur radio a unique and enriching experience.





# ABC OF THE RADIO AMATEUR

In the fascinating world of amateur radio, every letter of the alphabet can open the door to new knowledge, operating modes, and on-the-air adventures. This section is specially designed for those beginning their journey as amateur radio operators, but it also serves as a helpful review for seasoned hams who want to refresh essential concepts. Welcome to the ABC of Amateur Radio!

By KP4RY - Abimael Padró

## A - Antenna

A device used to transmit and receive radio waves.

## B - Bandwidth

The range of frequencies within a given band, used for transmitting a signal.

## C - CW (Continuous Wave)

A mode of radio transmission using Morse code signals.

## D - Duplex

The ability to transmit and receive signals simultaneously on different frequencies.

## E - Echo

A reflected radio signal that returns to the sender.

## F - Frequency

The number of cycles per second of a radio wave, measured in Hertz (Hz).

## G - Gain

A measure of how much an antenna increases the strength of a signal.

## H - HF (High Frequency)

Radio frequencies from 3 to 30 MHz, commonly used for long-distance communication.

## I - Interference

Unwanted signals that disrupt radio communications.

## J - JT65

A digital communication mode designed for weak signal contacts.

## K - Keyer

An electronic device used to send Morse code.

## L - Locator (Grid Square)

A system used to specify geographic locations for radio contacts.

## M - Modulation

The process of varying a carrier wave to transmit information.

## N - Noise

Unwanted random radio signals or static.

## O - Operator

A licensed amateur radio user.

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A licensed amateur radio user.

## P - Power Output

The amount of power transmitted by the radio, usually measured in watts.

## Q - QSO

A conversation or contact between two amateur radio stations.

## R - Repeater

A device that receives a signal and retransmits it to extend communication range.

## S - SSB (Single Side Band)

A type of voice modulation used in HF radio for efficient communication.

## T - Transceiver

A device that can both transmit and receive radio signals.

## U - UHF (Ultra High Frequency)

Radio frequencies from 300 MHz to 3 GHz, used for local communication.

## V - VHF (Very High Frequency)

Radio frequencies from 30 MHz to 300 MHz, often used for local communication.

## W - Watt

Unit of power used to measure transmitter output.

## X - XML (eXtensible Markup Language)

Used for data formats, sometimes in logging software.

## Y - Yagi Antenna

A directional antenna used to focus radio signals.

## Z - Z-match

An antenna tuner or matching device to optimize antenna impedance.

Knowing the basic and technical vocabulary of amateur radio is more than a tool: it's the key that allows us to communicate, learn, and share in a common language among colleagues from around the world. We hope this glossary has been useful in strengthening your passion for this borderless hobby. See you next QSO! KP4RY 73 - Abimael Padró

# Amateur Radio Zone

PHOTOS OF READER STATIONS (SHACKS, ANTENNAS, ACTIVATIONS, FIELD TRIPS).

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## New Antenna Installation at KP2B

Prominent DXer Jaime Vázquez has taken a major step in improving his station, KP2B, with the recent installation of a new Four Square antenna for the 40-meter band. This important project enjoyed the invaluable support of his amateur radio friends WP4TZ and KP3N, who traveled from Puerto Rico to collaborate on the project over a weekend. Photo taken from the KP2B Facebook page.

## Lake On The Air "LOTA"

Amateur radio operator Isidro De Jesús WP4NXI has developed an exciting initiative called LOTA (Lake On The Air), inspired by the successful POTA (Parks On The Air) program. This innovative proposal seeks to engage the amateur radio community in discovering and activating lakes around the world, promoting communication, camaraderie, and the natural preservation of these aquatic spaces.

LOTA invites operators to set up their stations near lakes, enjoy the beauty of the surroundings, and foster contact with other radio amateurs, thus celebrating the diversity of landscapes and cultures associated with these unique ecosystems.



## KP4ARN from his cabin

"Amateur radio is one of my hobbies, and I started in 1979 working as a technician at a commercial radio station. For many years, together with my father, Freddy Avilés WP4RM/sk, we carried out numerous projects building antennas, repeaters, and remote equipment as part of the amateur radio station we share.

Our other hobby is photography, with which I have captured great moments in our island's history and which I use in radio. I am a huge fan of SSTV, as we can show our photographs to other parts of the world and thus learn about Puerto Rico.

Our passion is experimentation and teamwork."



*"The true signal that unites us does not travel through  
the air, but through the passion we share."*

